

The Dental Licensure Objective Structured Clinical Examination: T-Minus One Year

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Why develop a DLOSCE?

- In 2016, the ADA Board of Trustees authorized funding for development of an OSCE-style, high stakes exam for initial dental licensure by the ADA's Department of Testing Services
- Why develop a DLOSCE?
 - Gives state boards the ability to identify the incompetent beginning practitioner with stronger exam reliability and validity evidence (and thus better protect the public)
 - Eliminates undesirable situations and complications that can arise from the use of patients in the examination process (e.g., patient's more pressing needs not treated in lieu of pursuing the "perfect lesion")
 - Potential to increase licensure portability once fully implemented and accepted
 - No other testing agencies expressed interest in moving this forward
 - The ADA possesses the in-house expertise to develop the DLOSCE through its Department of Testing Services (DTS)

Who serves on the DLOSCE Steering Committee?

- Overseeing exam development – the DLOSCE Steering Committee:

ADA Board of Trustees members	Dr. Richard Black, Chair (TX) Dr. Roy Thompson (TN)
General dentist members (formerly on CDEL)	Dr. Edward J. Hebert (LA) Dr. Prabu Raman (MO)
Educators with experience teaching comprehensive clinical dentistry	Dr. Michael Kanellis (IA) Dr. Frank Licari (UT)
State dental board members	Dr. David Carsten (WA) Dr. Mark R. Stetzel (IN)

What was the Committee's Charge?

- Governance
 - Identify a governance structure that is as free from conflicts of interest as possible (e.g., a Commission)
- Exam content and test specifications
 - Specify what content should appear on the exam
- Exam structure and format
 - Determine how many questions should be asked and what they will look like

What was the Committee's Charge?

- Identify and contract key vendors
 - Identify who will administer the examination and how questions will be stored
- Establish Test Construction Team (TCT) structure
 - Determine who will write items and how those teams are structured. Indicate the process for writing items.

What was the Committee's Charge?

- Identify state(s)/region(s) for field test
 - Identify where the DLOSCE should be piloted
- Develop candidate guide and software tools
 - Develop a guide and software programs to receive applications, etc.

Department of Testing Services (DTS)

DTS is working with the Steering Committee to implement the DLOSCE. DTS is a shared service of the ADA that implements high-stakes admission and licensure testing programs for:

Joint Commission on National Dental Examinations (JCNDE)	Council on Dental Education and Licensure (CDEL)
<ul style="list-style-type: none">• National Board Dental Examinations (NBDE)<ul style="list-style-type: none">• Part I• Part II• INBDE (under development)• NBDHE	<ul style="list-style-type: none">• Dental Admission Test (DAT)• Advanced Dental Admission Test (ADAT)
Outside clients	ADA Board of Trustees
<ul style="list-style-type: none">• Optometry Admission Test (OAT)• Canadian Dental Admission Test (CDAT)• Additional clients	<ul style="list-style-type: none">• Dental Licensure Objective Structured Clinical Examination (DLOSCE)

DTS Units

Examination Content, Scoring, Analysis, New Development

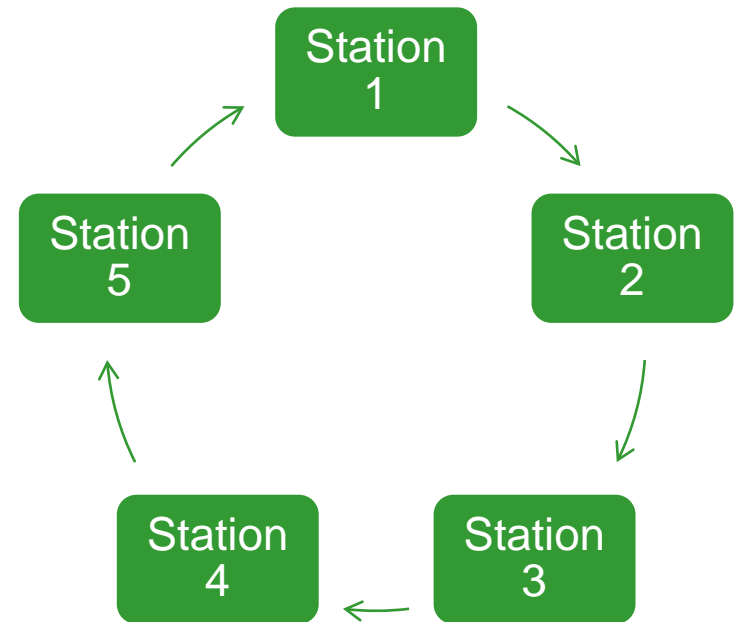
<p>Test Development</p> <p>Conducts Test Construction Team (TCT) meetings for seven examination programs (80+ meetings annually)</p>	<p>Research & Development - Psychometrics</p> <p>Oversees analysis and scoring of examinations (45,000+), professional investigations, and technical publications in support of examination programs</p>	<p>New Psychometric Development & Innovations</p> <p>Provides psychometric support in the development of new testing programs.</p>
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DTS Operations

<p>Test Administration</p> <p>Oversees application processing and test vendor administrations (40,000+ examinations)</p> <p>Responds to phone calls, live chats, emails, faxes (nearly 70,000 annually)</p> <p>Resolves testing day problems</p>	<p>Test Security and Fraud Prevention</p> <p>Test security policies, procedures, and candidate appeals; risk assessment</p>	<p>Communications</p> <p>Provides communications for stakeholders and communities of interest</p>
<p>Client Services/Special Projects</p> <p>Project management and services to outside clients</p>	<p>Volunteer and Meeting Coordination</p> <p>Oversees volunteer activities and meeting logistics for TCT and governance meetings.</p>	

What is an Objective Structured Clinical Examination (OSCE)?

- Assesses clinical competence and skills
- Candidates rotate through short, standardized stations
- Success requires critical thinking
- Widely used in health sciences



Why conduct an OSCE?

- Benefits
 - Assesses broad range of skills
 - Standardized (stations, competencies, tasks)
 - Strong validity evidence
 - Clinical and theoretical knowledge
 - Reliable
 - Fair

What could a dental OSCE look like?

- National Dental Examining Board (NDEB) Canada provides an example:
 - Expert developed
 - Questions selected by practitioners
 - Exam content kept current
 - Administered three (3) times per year
 - 50 physical stations (two questions each) plus rest stations
 - 5-minute, diverse stations
 - “Virtual OSCE” in near future
- NDEB of Canada has established strong validity evidence for its OSCE

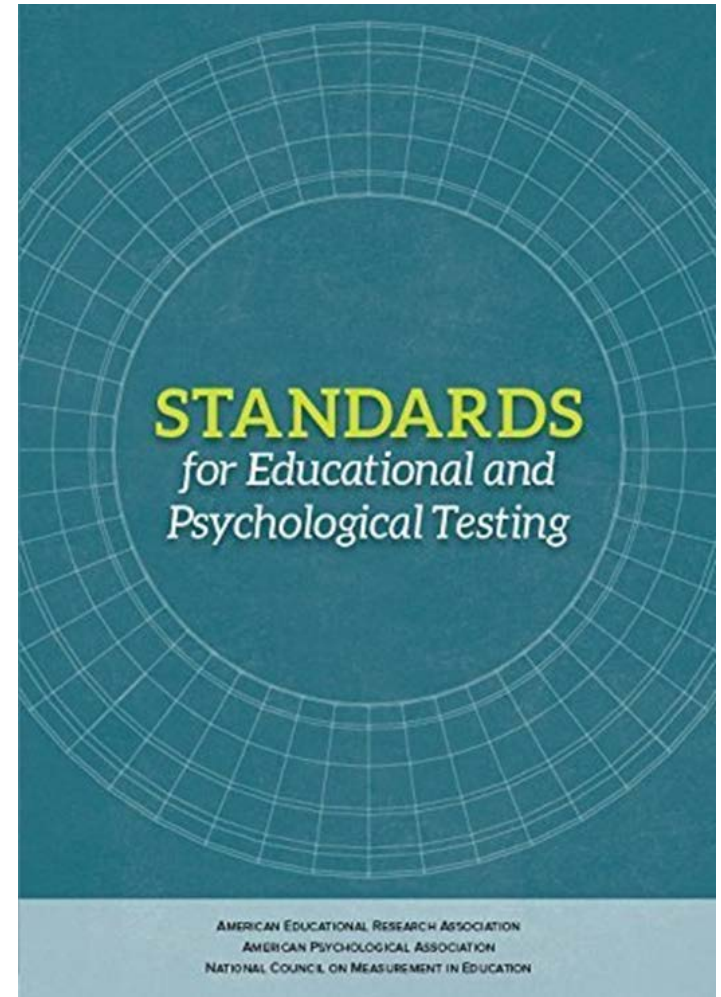
What evidence exists to support Canada's OSCE?

- Exam performance was correlated with student performance in final year
 - 2,317 students
 - Nine Canadian dental schools
 - Exams completed 1995-2000
- Positive correlations were obtained:
 - Written exam and final year results ($r=0.43$, $p<.001$)
 - OSCE and final year results ($r=0.46$, $p<.001$)
- Year-to-year and school-to-school variations minimal
- Findings supported validity of both examinations

Source: Gerrow, J.D., Murphy, H.J., Boyd, M.A., and Scott, D.A. (2003). Concurrent validity of written and OSCE components of the Canadian Dental Certification Examinations. *Journal of Dental Education*, 67 (8), 896-901.

Standards for Educational and Psychological Testing (2014)

- DLOSCE development efforts are informed by the *Standards for Educational and Psychological Testing*
- The *Standards* provide considerations for developing, implementing, and evaluating tests
- The *Standards* were developed by the American Educational Research Association (AERA), American Psychological Association (APA), and the National Council on Measurement in Education (NCME)



What will the DLOSCE cover?

- Focused exclusively on the clinical tasks a dentist performs while providing direct, chair-side treatment to patients.
- A “virtual OSCE”
- Use of a “traditional manikin” hand skill assessment will not be included
- The DLOSCE will reliably and accurately reflect the practice of clinical dentistry within the United States
- A DLOSCE Working Committee has been formed and is currently engaged in item development with DLOSCE Test Construction Teams

DLOSCE Topic Areas

- Diagnosis and Treatment Planning
 - Radiology
 - Pathology
 - Oral Medicine
 - Orofacial Pain
 - Temporomandibular disorders
- Restorative Dentistry
- Periodontics
- Oral and Maxillofacial Surgery
- Prosthodontics - Fixed
- Prosthodontics - Removable
- Implantology
- Endodontics
- Orthodontics

What progress has been made with content development?

- The Steering Committee has formed a working committee to focus on the most detailed aspects of DLOSCE content development
 - This working committee includes general dentists, dental educators, and a member of a state dental board
- The working committee has made recommendations concerning:
 - the number of DLOSCE test construction teams that are needed
 - the number of individuals who will serve on each test construction team
 - the specific subject matter expertise that should be represented within each test construction team
- The working committee members are actively involved in planning and facilitating DLOSCE test construction meetings

What progress has been made with content development?

- The Steering Committee has recruited a large number of test constructors to develop questions for the DLOSCE
- The test constructors include general dentists and dental educators with expertise in the topic areas covered on the examination
- The test construction teams align with the DLOSCE topic areas
- The test constructors have begun working in teams to develop and validate questions for the examination
- *Sample DLOSCE questions will be made available to stakeholders in 2019*

How will the DLOSCE and INBDE differ?

- The DLOSCE and the Integrated National Board Dental Examination (INBDE) will both be implemented in 2020
- The Steering Committee has taken the INBDE into consideration throughout the DLOSCE development process
 - The DLOSCE Steering Committee, Working Committee, and Test Specifications Review Panel each included one or more members of the Joint Commission committee charged with developing and validating the INBDE (i.e., the CIE)
 - DTS is working with both of these examination programs

The DLOSCE and INBDE both assess clinical skills (e.g., diagnosis and treatment planning, oral health management), but key differences also exist:

- The DLOSCE is focused exclusively on the clinical tasks a dentist performs while providing direct, chair-side treatment to patients.
 - Micro-judgments, errors and knowledge of success criteria, narrow focus
- The INBDE focuses on cognitive skills:
 - the biomedical underpinnings of clinical decisions, broader focus that includes the “why”
 - practice and profession considerations, evidence based dentistry, being good consumers of research, patient oral health care education

How will the DLOSCE and INBDE differ?

- Examples of how the INBDE and DLOSCE will differ:

INBDE Example	Corresponding DLOSCE Example
Understand basic principles of pharmacokinetics and pharmacodynamics for major classes of drugs and over-the-counter products to guide safe and effective treatment.	Review patient information and write an appropriate prescription.
Understand local and central mechanisms of pain modulation.	Identify the final needle position (point of insertion, angulation, and depth) immediately prior to injection that will best accomplish complete local anesthesia for a given procedure.
Understand dental material properties, biocompatibility, and performance, and the interaction among these in working with oral structures in health and disease.	Identify one or more flaws present in a metal-ceramic restoration.
Understand the principles and logic of epidemiology and the analysis of statistical data in the evaluation of oral disease risk, etiology, and prognosis.	<i>No corresponding DLOSCE example. Epidemiology and statistics are not covered on the DLOSCE.</i>

How can I participate in the pilot?

- The DLOSCE will be piloted in 2019 and available for administration for licensure purposes in 2020
- Performance on the pilot will not be used in licensure decision making.

DLOSCE Pilot Details (preliminary)

Dates:	December 1, 2019 through April 4, 2020
Time:	5 ½ hours administration time
Method:	Computer administration at professional testing centers
Programs:	Available to all US CODA accredited dental programs (includes an in-depth focus on 3 or 4 programs)
Participants:	US dental students who are eligible to take NBDE Part II.
Incentive:	\$200 to \$400 (based on performance)

How can I participate in the pilot?

- The pilot will involve an in-depth focus on 3 to 4 dental programs
 - We will ask these programs to encourage all of their eligible students to participate
 - We will ask these programs to provide GPA and/or class rank data for their participating students
- The ADA will survey dental deans in the spring of 2019 as a first step toward identifying the 3 to 4 programs
- Interested schools can reach out to the Department of Testing Services
 - Several schools have already indicated their interest

Where can I go for DLOSCE information?

- DLOSCE communication occurs through:
 - DLOSCE website (ada.org/dlosce)
 - Presentations
 - Oregon Board of Dentistry
 - Washington Dental Quality Assurance Commission
 - Ohio State Dental Board
 - University of Washington
 - Oregon Health Sciences University
 - Washington State Dental Association
 - American Association of Dental Boards
 - American Association of Endodontists
 - ADA Council on Dental Education and Licensure
 - Feedback has generally been very positive

Thank You

- The DLOSCE Steering Committee thanks you for your interest in the DLOSCE development effort
- In the coming year, the Steering Committee will continue to communicate its progress to communities of interest

Questions?